REMARKS

Claims 1-24 remain under consideration in the application. Claims 6 and 7 stand allowed. Claims 1-5, 8-17, and 19-24 have been rejected. Claim 18 has been objected to. No amendments are currently made. Reconsideration and further examination of the application is respectfully requested.

The invention relates to a method of using a JPEG engine to assist in efficiently constructing MPEG I-frames.

Rejection of claims 1-5 and 8:

Claims 1-5 and 8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over de Queiroz et al (U.S. Pat. No. 6,058,210) in view of Wise (U.S. Pat. No. 5,784,631) and Ferguson (U.S. Pat. No. 6,052,555). Applicant respectfully traverses the rejection because the examiner has not made out a *prima facie* case of obviousness. The examiner's case is deficient for at least the reason that the cited references, even when combined, do not teach or suggest all of the limitations of Applicant's claims. (MPEP 2143.03).

Claim 1 recites in part producing JPEG data in which the discrete cosine transform coefficients are encoded in a byte-aligned manner. None of the cited references teaches or suggests this claim limitation. In support of the rejection, the examiner cites column 130 lines 25-42 of Wise, asserting that "Wise discloses producing JPEG data in which DCT coefficients are encoded in a byte-aligned manner." (Paper10172005 page 2). The cited passage does not support the rejection. The cited passage describes detecting "marker codes" that "should only be detected when byte-aligned..." (Wise column 130 line 37). As applicant has previously explained, marker codes do not encode DCT coefficients (see Applicant's response filed August 2, 2005, page 6), and therefore this passage of Wise does not describe producing JPEG data in which the discrete cosine transform coefficients are encoded in a byte-aligned manner. In fact, none of the cited art teaches or suggests this limitation of Applicant's claim 1. The examiner's *prima facie* case fails for at least this reason, and claim 1 is believed allowable.

Applicant's claims 2-5 depend from claim 1 and add further limitations, and are therefore also believed allowable.

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Claim 8 recites in part <u>means for configuring the JPEG processing means to produce a JPEG-compliant data stream in which all discrete cosine transform coefficients are encoded in a byte-aligned manner.</u> As has been demonstrated with regard to claim 1, none of the cited art teaches or suggests this limitation of claim 8, and claim 8 is therefore believed allowable.

<u>Rejection of claims 9-17 and 19-24:</u>

Claims 9-17 and 19-24 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Wise (U.S. Pat. No. 5,784,631). Applicant respectfully traverses the rejection. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California,* 2 USPQ2d 1051, 1053 (Fed Cir. 1987).

Claim 9 recites a <u>table of Huffman codes for encoding JPEG DC coefficients, each Huffman code representing a range of magnitudes for a DC coefficient, each Huffman code to be used with a following bit pattern that encodes which of the range of magnitudes represents the value of the DC coefficient, the combined lengths of each Huffman code and corresponding following bit pattern being an integer multiple of 8 bits.</u> In support of the rejection, the examiner cites column 128 lines 26-28 and column 151 lines 17-27 of Wise. Neither passage supports the rejection.

Column 128 lines 26-28 of Wise merely describes a "16 bit length count field" associated with "marker codes", and does not describe a table of Huffman codes to be used with following bit patterns, <u>the combined lengths of each Huffman code and corresponding following bit pattern being an integer multiple of 8 bits.</u>

Column 151 lines 17-27 of Wise describes "a table of 8 bit values" called "HUFFVAL". HUFFVAL is a well-known construct used to generate JPEG Huffman tables, and is not itself a <u>table of Huffman codes.</u> (See the code listing in Appendix A of Applicant's specification, lines 470-530). The fact that HUFFVAL is "a table of 8 bit values", without more, says nothing about the lengths of the Huffman codes generated by the table.

Because Wise does not include each and every element of Applicant's claim 9, claim 9 is not anticipated by Wise and is believed allowable.

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Claim 10 depends from claim 9 and adds further limitations, and is therefore also not anticipated by Wise. Claim 10 is believed allowable.

Claim 11 recites a <u>table of Huffman codes for encoding JPEG AC coefficients, each Huffman code representing a run/size combination for an AC coefficient, each Huffman code to be used with a following bit pattern that encodes the value of the AC coefficient, the combined lengths of each Huffman code and corresponding following bit pattern being an integer multiple of 8 bits</u>. This claimed table is analogous to the table claimed in claim 9, but is for encoding JPEG AC coefficients rather than JPEG DC coefficients. Wise fails to anticipate claim 11 for the same reasons that it fails to anticipate claim 9, and claim 11 is believed allowable.

Applicant's claim 12 depends from claim 11 and adds further limitations, and is therefore also not anticipated by Wise. Claim 12 is believed allowable.

Claim 13 recites a <u>lookup table that correlates byte-aligned JPEG DC coefficient codes and following bits with equivalent MPEG DC coefficient codes and following bits</u>. Claim 14 recites a <u>lookup table that correlates byte-aligned JPEG AC coefficient codes and following bits with equivalent MPEG AC coefficient codes</u>. In rejecting these claims, the examiner cites column 151 lines 17-27 and Figure 80 of Wise. As has been previously explained with regard to claim 9, column 151 lines 17-27 of Wise do not describe <u>byte-aligned JPEG ... coefficient codes</u>, and therefore that passage does not support a rejection of claims 13 and 14.

The examiner asserts that Figure 80 of Wise "shows equivalence between JPEG and MPEG codes". (Paper 10172005 page 6). Applicant is unable to find any reference in the Wise patent to Figure 80 other than in the "FIGURES" section, which states that "Fig. 80 shows a quantization table memory map". (Wise column 9 line 48). No "codes" are shown if Figure 80. Quantization tables do not contain Huffman codes. In fact, Figure 80 of Wise appears to be intended to show a *difference* between JPEG and MPEG, rather than an equivalence. In short, nothing about Figure 80 of Wise supports the examiner's assertion.

Because Wise does not describe each and every element of Applicant's claims 13 and 14, these claims are not anticipated by Wise and are believed allowable.

Applicant's claim 15 recites a <u>method, comprising configuring a JPEG engine</u> <u>to produce JPEG-compliant data comprising bit patterns that encode discrete cosine</u> <u>transform coefficients, each bit pattern that encodes a discrete cosine transform</u> <u>coefficient having a length that is an integer multiple of eight bits</u>. In rejecting claim 15, the examiner cites column 128 lines 26-28 of Wise, asserting that this passage discloses configuring a JPEG engine such that <u>each bit pattern that encodes a discrete</u> <u>cosine transform coefficient having a length that is an integer multiple of eight bits</u>. As has been previously explained, this passage of Wise describes a "16 bit length count field" associated with "marker codes", and does not deal with <u>bit patterns that</u> <u>encode discrete cosine transform coefficients</u>.

Because Wise does not describe each and every element of Applicant's claim 15, this claim is not anticipated by Wise and is believed allowable.

Applicant's claim 16, 17, and 19 depend from claim 15 and add further limitations, and are therefore also not anticipated by Wise. These claims are believed allowable.

Claim 20 recites a <u>method, comprising constructing JPEG data in which each</u> <u>bit pattern encoding a run/value combination has a length that is an integer multiple of</u> <u>eight bits.</u> In support of the rejection, the examiner cites column 128 lines 26-28 of Wise. As has been previously explained, this passage of Wise describes a "length count" associated with a "marker segment", and does not describe a <u>bit pattern</u> <u>encoding a run/value combination</u>. It most certainly does not describe <u>constructing</u> <u>JPEG data in which each bit pattern encoding a run/value combination has a length</u> <u>that is an integer multiple of eight bits.</u> Because Wise does not describe each and every element of Applicant's claim 20, Wise does not anticipate claim 20 and claim 20 is believed allowable.

Claims 21-24 depend from claim 20 and add further limitations, and are therefore also not anticipated by Wise and are believed allowable.

Claim 18 has been objected to as being dependent on a rejected base claim (claim 15), but the examiner has indicated that that claim 18 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Applicant believes this objection to be moot in light of the arguments given above for the allowability of claim 15. Claim 18 depends from

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allowable claim 15 and adds further limitations, and is therefore also believed allowable as written.

Applicant believes this application is in condition for allowance, and such action is earnestly solicited.

Respectfully submitted,

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